

NOAA G-IV N49RF ERROR SUMMARY
HURRICANE 2010

13 Sept 2010 AL92 (Pre Hurricane Karl)
HRD Star Pattern (PHX) TISX>>KMCF

Flight ID: 20100914N1

<u>Sensor or system</u>	<u>Number or Name</u>
Accelerometer	ACINS
Altitude	PALT
Attack Angle	AKRD2
Dew Point Probe	DPRC
Dynamic Pressure	QC2M
Geopotential Altitude	GPGALT
Inertial Selected	VEW, VNS
Static Pressure	PS2M
Slip Angle	SSRD1
Temperature Probe	AT3/TT3
True Airspeed	TAS2
Constants File	49cal093
Project Directory	acdata/2010/MET

Local Met Data	Takeoff (1723z)	Landing (0056z)
Aircraft Static Pressure	1007.6 mb	1013.8 mb
Tower Pressure (corrected)	1010.6 mb	1015.8 mb

Notes:

All Inertial 2 (PITR) and Honeywell 2 GPS (SG2) values spiked to zero at 23z and 01z. Inertial 1 is default.

PALT reading 25-30 meters lower than ADCPALT.

The APN-232 Radar derived Geopotential Altitude (HGALT) was 100 or more meters lower than Collins GPS derived Geopotential Altitude (GPALT). HGALT also spiked occasionally with up to 500 meter downward spikes (that gradually worked back to level). There was one very large downward spike of more than 7000 meters at 1839z.

The Left Dew Point sensor (DPLC) again read far too high through the entire flight. At times it read as much as 15C higher than AT3, and up to 20C higher than DPRC. There was one instance of supersaturation during the cruise portion of flight (at 2156z) where the RH exceeded 100% when using the DPRC.

The Air Data Computer Attack Angle (ADCAOA) was again consistently 0.5 degrees higher than the Left and Right Attack Angle sensors (AKRD1 and AKRD2).

The bottom Sideslip Angle (SSRD2) shows a +1.15 degree bias through the cruise portion of flight. SSRD1 (the top Sideslip Angle probe) is the default and displayed a mean value of -0.13 degrees.

Vertical Winds showed a mean of +0.15 during the cruise portion of flight.

All other flight level instruments worked optimally during the flight.

- 26 drop points assigned by HRD
- 27 AVAPS II dropsondes deployed
- Of those 27 drops, 26 were good and transmitted to Miami. Sonde at Drop Pt #17 failed to acquire aircraft data but a backup was good
- Of the 26 good sondes, for the third consecutive G-IV flight using AVAPS II sondes, all 26 coded surface winds! ☺

Flight Directors: Richard Henning and Jack Parrish (813) 828-3310 ext. 3086

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flt ID: 20100914N	From: TISX	To: KMCF
Flt. No: 10-105	Blk In: 0105 z	Time On: 0056z
ETD: 1730z	Blk Out: 1715 z	Time Off: 1723z
ETE: 7+30	Blk Time: 7.8 Hrs	Flt Time: 7.6 Hrs
Sponsoring Org: HRD	Program: PHX (Research)	Purpose: DIST 92 L

AOC Flight Crew

Aircraft Commander: GLOVER	Data System: DEFE0
Co-Pilot: TWINING TOTH	AVAPS: SMITH MASCARO
Navigator: /	System Eng: GOLDSTEIN
Flight Eng: /	AA:
Flight Director: PARRISH, HENNING	AA:
Avionics:	Crew Chief: KEVIN ROTTEVEEL

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
AVAPS II 27 SONDES RELEASED 1 BAD (lost aircraft data) 26 GOOD and transmitted all 26 SFC winds		

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name:

Mission ID: NOAA9 WXWXA 92LG

Penetration number and time

Recco Times

Fix # Fix Time

050/9 31/24 29.89
~~050/9~~ WX TISX
 landing KMCF 090/8 28/23
 altim 28.28
 30.00

1924Z
1826Z 18010'N
1805N 83°35'W
83 36W

W7WXA 9226

Out 1715
182 17.7D 83.6W

ALL CODED SFC WINDS

FLIGHT ID/Storm 100914N AVAPS OPERATOR Parrish FLIGHT DIRECTOR Henning

Turn/Ch	Drop#	Ob #	Launch Time	Sonde ID	Sig Wx	Splash Pressure	Transmission Time	Notes
1	1	01	194935	5229	Bkn CS b/w	1010.1	200923	130/16
2	2	02	195717	5051	Top of CS	1009.0	201624	175/20
3	3	03	200510	5304	In th CS	1009.0	202437	060/08
Turn 4 3	4	04	201250	5225	"	1008.2	203223	145/11
1	5	05	202034	5102	In thin CS	1008.0	203957	170/08
2	6	06	202811	5204	In th cl-	1007.6	204610	190/07
Turn 4 3	7	07	203632	5253	Sct AG b/w	1007.7	205536	130/05
4	8	08	204306	5017	cl-	1007.0	210227	145/06
1	9	09	205154	5115	Bkn AS b/w	1007.3	211147	210/07
Turn 5 2	10	10	205936	5213	"	1006.6	211822	295/07
3	11	11	210846	5241	Top of CS	1006.4	212743	305/12
4	12	12	211859	5003	Above Bkn CS	1006.9	213938	300/12
Turn 6 1	13	13	212655	5131	Above Bkn CS	1007.5	214717	255/03
2	14	14	213351	5029	"	1006.6	215350	290/09
3	15	15	214334	5176	In AS	1006.7	220450	300/10
Turn 7 4	16	16	215109	5142	"	1006.6	221133	020/13
1	17	-	215921	5791	Top of CS	No GA → Backup No Hc data		
2	18	17	220137	5566	"	1007.6	222205	045/15
3	19	18	220649	5098	"	1008.4	222605	045/17
4	20	19	221353	5170	Above Bkn CS	1009.6	223623	035/13
Turn 8 1	21	20	222005	5035	Cl-	1009.6	224054	040/12
2	22	21	223033	5174	Over cs thin	1009.3	225005	045/15
3	23	22	223936	5773	In CS	1009.1	230020	090/21
Turn 9 4	24	23	224854	5020	"	1008.8	230851	090/14
1	25	24	225626	5134	Top of CS	1008.9	231728	095/21
2	26	25	230516	5151	Above CS b/w	1010.8	232649	125/16
Turn 10 3	27	26	231240	5206	Above thin CS	1011.2	233457	100/10
	28							
	29							
	30							
	31							
	32							
	33							
	34							
	35							

ETA 2100 EDT

LS
LS
LS

N49RF AVAPS DROP LOG

Lead Tech: Gabe Defeo

Project: Hurricane '10 Mission: HRXFlight ID: 100914Take Off: 1723

Landing: _____

Flt Dir: PARRISH / HERRING

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Charge \$\$ To	Comments	Good ?
1	094735229	1	0	1949	4	man	HRD		✓
2	094645051	2	.6	1957	4	man	HRD		✓
3	100145304	3	0	2005	4	man	HRD		✓
4	100145225	4	0	2012	4	man	HRD		✓
5	094415102	1	.4	2020	4	man	HRD		✓
6	100145204	2	.6	2028	4	man	HRD		✓
7	094735253	3	.5	2036	4	man	HRD		✓
8	095335017	4	.5	2043	4	man	HRD		✓
9	100145115	1	.6	2051	4	man	HRD		✓
10	100145213	2	.4	2059	4	man	HRD		✓
11	100145241	3	0	2108	4	man	HRD		✓
12	100145003	4	0	2118	4	man	HRD		✓
13	094735131	1	.5	2126	4	man	HRD		✓
14	094735029	2	0	2133	4	man	HRD		✓
15	100155126	3	0	2143	4	man	HRD		✓
16	095035142	4	.5	2151	4	man	HRD		✓
17	094735791	1	.4	2159	4	man		NO GEO ALT	NO
18	094735566	2	.6	2201	4	man		DROP 17 B/4	✓
19	094645098	3	.0	2206	4	man			✓
20	100155170	4	0	2213	4	man		MISSING DATA	✓
21	100215035	1	0	2220	4	man		MISSING DATA	✓
22	100155174	2	0	2230	30	man		MISSING DATA	✓
23	094735773	3	0	2239	4	man			✓
24	095335020	4	0	2248	4	man			✓
25	094735134	1	0	2256	4	man			✓
26	094735151	2	0	2305	4	man			✓
27	100145206	3	0	2312	4	man			✓
28									
29									
30									
31									
32									
33									
34									

1 = 400.7

2 = 403.7

3 = 404.7

4 = 405.7



